



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/541,351

02/22/2006

Heinz Leiber

KIRS.0021

7747

38327

7590

06/05/2008

REED SMITH LLP

3110 FAIRVIEW PARK DRIVE, SUITE 1400

FALLS CHURCH, VA 22042

EXAMINER

AMAYA, CARLOS DAVID

ART UNIT

PAPER NUMBER

2836

MAIL DATE

DELIVERY MODE

06/05/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/541,351	<b>Applicant(s)</b> LEIBER, HEINZ	
	<b>Examiner</b> CARLOS AMAYA	<b>Art Unit</b> 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 7/5/2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/5/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/5/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because the drawings should be labeled. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Reference numeral 36 is not shown in the drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The disclosure is objected to because of the following informalities.
4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.

- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

5. The disclosure is objected to because of the following informalities: On page 6 Applicant refers to a "Rear left SP box 41" and "LIN 41", however, there is only a LIN 41 on figure 4. Also on page 7 lines 27-30 Applicant refers to a "bulkhead 1' " and a "passthrough 1' ". Appropriate correction is required.

### ***Claim Objections***

6. Claims are objected to because of the following informalities: Please make clear when the claim is referring to one box or plural boxes. Claim 6 line 3 delete "as well as". On claim 6 line 3 "the fuse and distribution function" lacks antecedent basis. Claim 14 "the generator" lacks antecedent basis. Claim 18 "i.e." should be deleted. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 6-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Maue et al. (US 5,785,532).

With respect to claim 1 Maue discloses an on-board power system for a motor vehicle with a large number of consumers and at least one central electronic system housed in a box (central power distribution box 20), wherein the consumers are connected with this at least one central electronic system, and with a body bulkhead between the engine compartment and the passenger cabin (figure 5 shows central power distribution box 20 to make connection with an engine compartment and cabin side), characterized in that the at least one central electronic system housed in the box is located at least close to the body bulkhead on the passenger cabin side (figure 5, bulkhead 70 and passenger compartment 74), and that at least one sealed splitter (passthrough) is provided for the connecting cables running from the connectors on the box for the central electronic system to the consumers in the engine compartment (connector 22 figures 1-2, and connectors 132 figure 3).

With respect to claim 2 Maue discloses the on-board power system according to claim 1, characterized in that the at least one box is mounted flush and directly on the

body bulkhead, and that the at least one splitter (passthrough) faces a side of the box that is furnished with connectors, and that the connecting cables for the engine compartment are connected to these connectors. See figure 5.

With respect to claim 3 Maue disclose the on-board power system according to claim 1, characterized in that at least one sealed splitter (passthrough) that is furnished with connectors on both sides is located in the body bulkhead, the connectors on the one side of the splitter connecting the cables to the consumers, and on the other side connecting short connecting cables to the connectors on box. Figure 5 shows connectors for connecting cables on the consumer sided 74.

With respect to claims 6-7, 9 Maue disclose the on-board power system according to claim 1, characterized in that as well as the central electronic system, switching means for the fuse and distribution function (SP boxes) are also integrated in the box/boxes, and preferably protect all low and high current circuits to the adjacent consumers in the SP box. Maue discloses that the distribution box 20 comprises a plurality of fuses 50 and relays 52 to provide and receive signals.

With respect to claim 8 Maue discloses the on-board power system according to claim 5, characterized in that the outputs from the connecting cables are protected by switches (Mosfets and/or relays) and/or reversible fuses (polyswitches). Fuses 50, as shown in the figures.

With respect to claims 10-11 Maue discloses the on-board power system according to one of the claims, characterized in that the connectors on box/boxes are constructed as plugs and/or as direct contacts, and that one side of each of the boxes is

furnished with plugs, and the other side is furnished with direct contacts. Figure 2 shows direct electrical connectors 22, 24 and 26. Figure 3 shows plugs/connectors 132.

With respect to claim 12 Maue discloses the on-board power system according to claim 1, characterized in that each of the boxes is connected to the respectively adjacent consumers and sensors. Figures 4a-4k and 5 shows the distribution box connected to consumers and sensors.

With respect to claim 13, 15 Maue discloses the on-board power system according to one of the claims, characterized in that an energy storage device is connected to at least one of the SP boxes. Energy storage device 200; distribution box 20 supplies power to the different components connected to the box.

With respect to claims 14 Maue discloses the on-board power system according to claim 13, characterized in that the energy storage device and the associated SP box that are used to start the engine are situated close to the engine, and that the generator is connected to this energy storage device. Figure 5 show alternator 202 and battery 200 connected through distribution box 20.

With respect to claims 16 Maue discloses the on-board power system according to claim 5, characterized in that the front SP box(es) distribute the current for the rear space (inside and trunk) and provide electrical protection therefor. Box 20 provides power and protection to different rear devices, rear wiper motor, for example.



***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maue et al. (US 5,785,532).

With respect to claims 4-5 Maue disclose the on-board power system according to claim 1, however, does not expressly disclose that two boxes for the two sides of the vehicle are arranged on the bulkhead.

Maue discloses that is known to provide various power distribution boxes in different vehicle location, thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided distribution boxes in different locations of the vehicle where power/signals are needed, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

11. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maue et al. (US 5,785,532) in view of Bartel et al. (US 6,056,076).

With respect to claim 17 Maue discloses the on-board power system according to claim 6, however, does not expressly disclose a second battery housed in the rear section of the vehicle and is connected to the sp box that is located there.

Bartel discloses an emergency battery 11 provided in the trunk of a vehicle for providing back up power when the main battery fails, furthermore, emergency battery 13 is connected to trunk lock 13.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a second battery for emergency power in the invention disclosed by Maue and provide a junction box/distribution box there for the purpose of providing back-up power to essential working parts of the automobile.

12. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maue et al. (US 5,785,532) in view of Tamai et al (US 2003/0137285).

With respect to claims 18-19 Maue discloses the on-board power system according to one of the claims, however, does not expressly disclosed that one SP box assumes the master function in the software structure and the other SP boxes assume slave functions (they only receive signals and actuate consumers, and that the slave boxes include an emergency program for minimum processing in the event that the master SP box fails.

Tamai discloses a master CPU 20a and slave CPU 20b; at start up only a minimum function is provided for the other CPUs , the master CPU is in charge of providing respective power to the slave CPUs, however, each CPU is capable of minimum current consumption based on signals received.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention disclosed by Maue to include plural

Art Unit: 2836

junction boxes with CPUs, and to provide a master CPU for the purposes of controlling different parts of the vehicle with respect to a central CPU.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARLOS AMAYA whose telephone number is (571) 272-8941. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2800. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Sherry/  
Supervisory Patent Examiner, Art Unit 2836

/C. A./  
Examiner, Art Unit 2836